

Question: Do you have another study stating concerns about EMF risks on health?

Answer: Yes, the full study labeled **Exhibit J** will be included in an attachment.

This is an excerpt from California EMF Risk Evaluation June 2002.

8.0 EPIDEMIOLOGY OF THE LEUKEMIAS

p. 119 STATEMENT TO THE PUBLIC

The reviewers expressed their judgments using two distinct sets of guidelines to evaluate the evidence:

- Using the traditional guidelines of the International Agency for Research on Cancer (IARC) for childhood leukemia, their classifications for EMFs ranged from “human carcinogen” to “probable human carcinogen” to “possible human carcinogen” (IARC’s Groups 1, 2A, 2B). Panels convened by IARC and the National Institutes for Environmental Health Sciences classified EMFs as a “possible human carcinogen” for childhood leukemia.
- Using the traditional guidelines of the International Agency for Research on Cancer (IARC) for adult leukemia, their classifications for EMFs ranged from “human carcinogen” to “possible human carcinogen” (IARC’s Group 1 and 2B). The IARC Working Group classified the EMF evidence on adult leukemia as “inadequate.” The National Institutes for Environmental Health Sciences classified it as “possible.”
- **Using the Guidelines developed especially for the California EMF program, one of the reviewers “strongly believes” that high residential EMFs cause some degree of increased risk of childhood leukemia, another was “prone to believe” that they do, and another was “close to the dividing line between believing or not believing.”**
- Using the Guidelines developed especially for the California EMF program, one of the reviewers was “prone to believe” that high residential or occupational EMFs cause some degree of increased risk of adult leukemia, while the other two were “close to the dividing line between believing or not believing.”

There are several reasons for the differences between the DHS reviewers and those of IARC. The three DHS scientists thought there were reasons why animal and test tube experiments might have failed to pick up a mechanism or a health problem; hence, the absence of much support from such animal and test tube studies did not reduce their confidence much or lead them to strongly distrust epidemiological evidence from statistical studies in human populations. They therefore had more faith in the quality of the epidemiological studies in human populations and hence gave more credence to them. Adult leukemia has an incidence of around 1/10,000 per year. If one doubled this rate to 2/10,000 per year and accumulated it over a lifetime of continuous high exposure one would accumulate a lifetime risk of 1%. Thus the vast majority (99%) of highly exposed people would still not contract this disease. Furthermore, calculations suggest that the fraction of all cases of childhood leukemia that one could attribute to EMFs would be no more than a few percent of the total cases (if any). Similar considerations apply to adult leukemia.

Nevertheless, if EMFs do contribute to the cause of this condition, even the low fractions of attributable cases and the size of accumulated lifetime risk of highly exposed individuals could be of concern to regulators. Indeed, when deemed a real cause, estimated lifetime risks smaller than this (1/100,000) have triggered regulatory evaluation and, sometimes, actual regulation of chemical agents such as airborne benzene. The uncommon, accumulated high-EMF exposures implicated by the evidence about these conditions